



A449 NORTH AND SOUTHBOUND CONCRETE CARRIAGEWAY REPAIRS

Despite national lockdowns across the UK and Wales, LMS Highways have been in Wales repairing sections of failed concrete on the A449 on behalf of Alun Griffiths.



LMS Highways first started work with Alun Griffiths on the A449 in the summer of 2019, when we were called to provide emergency carriageway repairs due to an aircraft accident damaging the concrete bays. Since then we have continued our working relationship returning on multiple visits to provide full depth concrete bay replacements and inlaid crack repair throughout the North and South Bound Carriageway.

Maintaining a safe and usable highway network is crucial in these times to ensure our key workers can continue travelling to places of work and essential deliveries can be made throughout the country to those in need. To guarantee this remains possible, LMS Highways have been working tirelessly across the country providing operationally essential road repairs and in early November that included the A449.



'Having worked with LMS for a number of years now, they continue to provide an efficient service, particularly when faced with these emergency concrete carriageway repairs. Their innovative approach enables us to offer our client their preferred solution, limiting disruption to the highways network in South East Wales, whilst providing a quality end product that will last.'

Alex Huges, Alun Griffiths

We were instructed to repair a number of CRCP failures located on both the North and South bound carriageways. Continuously Reinforced Concrete Pavement is constructed with steel reinforcing bars placed within the concrete, continuously along the entire length of the pavement without any transverse joints. The result is a continuous, smooth-riding surface capable of withstanding the heaviest traffic loads and the most adverse weather conditions.

The teams refined process starts with the removal of the existing damaged surface, a vacuum-lift system is used to remove large, continuous sections of concrete in one complete piece and lifted straight onto a disposal truck. For smaller sections or areas with cracking a pecker and grab lorry are the safest and most efficient method of removal as the deep-set cracking throughout prevents a strong vacuum seal from being achieved.

With over 35 years' experience in infrastructure our highly trained crews are capable of adapting our methods and processes immediately in order to best suit the requirements and variable conditions of a job.

Once they've finished removing the damaged concrete, the crew begin to prep the area with a waterproof membrane and reinforcing steel mesh which is run throughout to give added tension and strength to the concrete.

The concrete formula used for these repairs is known as rapid set and as the name suggests has an incredibly fast curing period which also doesn't require conventional methods of leaving the repair to harden for between 7 and 28 days. This enables the team to keep to the time restricted schedule and return the carriageway at the end of each night, despite being faced with challenging winter conditions. With this concrete formula and CRCP process the new surface benefits from greater durability, a longer life expectancy and gives the best long-term value of any pavement type with minimal maintenance requirements.

